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## WHAT IS CLAIMED IS:

1. A color printer for printing to a photosensitive medium comprising:

a first light source for generating a first color beam;
a first modulator for modulating said first color beam;
a second light source for generating a second a color beam;
a second modulator for modulating said second color beam;
a third light source for generating a third color beam;
a third modulator for modulating said third color beam;
at least a fourth light source for generating a fourth color

beam;

a fourth modulator for modulating at least said fourth color

beam; and

an optical system for combining and imaging said modulated beams onto said photosensitive medium.

- 2. A color printer as in claim 1 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.
- 3. A color printer as in claim 1 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.
- 4. A color printer as in claim 1 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.
- 5. A color printer as in claim 1 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.
- 6. A color printer as in claim 1 wherein said photosensitive medium is a photographic film having at least four sensitive layers.

- 7. A color printer as in claim 1 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.
- 8. A color printer as in claim 1 wherein said photosensitive photographic print film having at least four sensitive layers.
- 9. A color printer as in claim 1 wherein said photosensitive photographic reversal film having at least four sensitive layers.
- 10. A color printer as in claim 1 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.
- 11. A color printer as in claim 1 wherein said modulators are reflective LCDs.
- 12. A color printer as in claim 1 wherein said modulators are transmissive LCDs.
- 13. A color printer as in claim 1 wherein said modulators are digital micromirror devices.
- 14. A color printer as in claim 1 wherein said modulators are gated light valves.
- 15. A color printer as in claim 1 wherein said modulators are acousto-optic.
- 16. A color printer as in claim 1 wherein said modulators are comprised of electro-optic modulators and polygon scanners.

- 17. A color printer as in claim 1 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, bluegreen, blue, and ultra-violet lasers.
- 18. A color printer as in claim 1 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, a blue LED array, and an ultra-violet LED array.
- 19. A color printer as in claim 1 wherein each of said light sources are comprised of infra-red LED, red LED, green LED, blue-green LED, yellow-green LED, blue LED, and ultra-violet LED.
- 20. A color printer as in claim 1 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.
- 21. A color printer as in claim 1 wherein said modulators are comprised of electro-optic modulators and a raster scan device.
- 22. A color printer as in claim 1 wherein said modulators are comprised of electro-optic modulators and a hologon.
- 23. A color printer as in claim 1 wherein said modulators are comprised of electro-optic modulators and a galvo.
  - 24. A method of printing to a photosensitive medium

comprising:

generating a first color beam; modulating said first color beam; generating a second color beam; modulating said second color beam;

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generating a third color beam;
modulating said third color beam;
generating at least a fourth color beam;
modulating at least said fourth color beam; and
an optical system for combining and imaging said
modulated beams onto said photosensitive medium.

- 25. A color printer as in claim 24 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.
- 26. A color printer as in claim 24 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.
- 27. A color printer as in claim 24 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.
- 28. A color printer as in claim 24 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.
- 29. A color printer as in claim 24 wherein said photosensitive medium is a photographic film having at least four sensitive layers.
- 30. A color printer as in claim 24 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.
- 31. A color printer as in claim 24 wherein said photosensitive photographic print film having at least four sensitive layers.
- 32. A color printer as in claim 24 wherein said photosensitive photographic reversal film having at least four sensitive layers.

- 33. A color printer as in claim 24 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.
- 34. A color printer as in claim 24 wherein said modulators are reflective LCDs.
- 35. A color printer as in claim 24 wherein said modulators are transmissive LCDs.
- 36. A color printer as in claim 24 wherein said modulators are digital micromirror devices.
- 37. A color printer as in claim 24 wherein said modulators are gated light valves.
- 38. A color printer as in claim 24 wherein said modulators are acousto-optic.
- 39. A color printer as in claim 24 wherein said modulators are electro-optic modulators combined with polygon scanners.
- 40. A color printer as in claim 24 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, bluegreen, blue, and ultra-violet lasers.
- 41. A color printer as in claim 24 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, blue LED array, and an ultra-violet LED array.

- 42. A color printer as in claim 24 wherein each of said light sources are comprised of infra-red LED, red LED, green LED, blue-green LED, yellow-green LED, blue LED, and an ultra-violet LED.
- 43. A color printer as in claim 24 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.
- 44. A color printer for printing to a photosensitive medium comprising:

a first light source for generating a first color beam;

a first modulator means for modulating said first color

beam;

a second light source for generating a second a color beam;

a second modulator means for modulating said second color

beam;

a third light source for generating a third color beam;

a third modulator means for modulating said third color

beam;

at least a fourth light source for generating a fourth color

beam;

a fourth modulator means for modulating at least said

fourth color beam; and

an optical system for combining and imaging said modulated beams onto said photosensitive medium.

- 45. A color printer as in claim 44 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.
- 46. A color printer as in claim 44 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.

- 47. A color printer as in claim 44 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.
- 48. A color printer as in claim 44 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.
- 49. A color printer as in claim 44 wherein said photosensitive medium is a photographic film having at least four sensitive layers.
- 50. A color printer as in claim 44 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.
- 51. A color printer as in claim 44 wherein said photosensitive photographic print film having at least four sensitive layers.
- 52. A color printer as in claim 44 wherein said photosensitive photographic reversal film having at least four sensitive layers.
- 53. A color printer as in claim 44 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.
- 54. A color printer as in claim 44 wherein said modulators are reflective LCDs.
- 55. A color printer as in claim 44 wherein said modulators are transmissive LCDs.
- 56. A color printer as in claim 44 wherein said modulators are digital micromirror devices.
- 57. A color printer as in claim 44 wherein said modulators are gated light valves.

- 58. A color printer as in claim 44 wherein said modulators are acousto-optic.
- 59. A color printer as in claim 44 wherein said modulators are electro-optic modulators combined with polygon scanners.
- 60. A color printer as in claim 44 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, bluegreen, blue, and ultra-violet lasers.
- 61. A color printer as in claim 44 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, blue LED array, and an ultra-violet LED array.
- 62. A color printer as in claim 44 wherein each of said light sources are comprised of infra-red LED, red LED, green LED, blue-green LED, yellow-green LED, blue LED, and an ultra-violet LED.
- 63. A color printer as in claim 44 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.
- 64. A color printer for printing to a photosensitive medium comprising:

a first light source for generating a first color beam; a second light source for generating a second a color beam; a third light source for generating a third color beam; at least a fourth light source for generating a fourth color

beam;

a modulator for modulating said first, second, third, and fourth color beams; and

an optical system for combining and imaging said modulated beams onto said photosensitive medium.

- 65. A color printer as in claim 64 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.
- 66. A color printer as in claim 64 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.
- 67. A color printer as in claim 64 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.
- 68. A color printer as in claim 64 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.
- 69. A color printer as in claim 64 wherein said photosensitive medium is a photographic film having at least four sensitive layers.
- 70. A color printer as in claim 64 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.
- 71. ' A color printer as in claim 64 wherein said photosensitive photographic print film having at least four sensitive layers.
- 72. A color printer as in claim 64 wherein said photosensitive photographic reversal film having at least four sensitive layers.
- 73. A color printer as in claim 64 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.

- 74. A color printer as in claim 64 wherein said modulator is a reflective LCD.
- 75. A color printer as in claim 64 wherein said modulator is a transmissive LCD.
- 76. A color printer as in claim 64 wherein said modulator is a digital micromirror device.
- 77. A color printer as in claim 64 wherein said modulator is a gated light valve.
- 78. A color printer as in claim 64 wherein said modulator is an acousto-optic.
- 79. A color printer as in claim 64 wherein said modulator is an electro-optic modulator.
- 80. A color printer as in claim 64 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, bluegreen, blue and ultra-violet lasers.
- 81. A color printer as in claim 64 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, a blue LED array, and an ultra-violet LED array.
- 82. A color printer as in claim 64 wherein each of said light sources are comprised of infra-red LED, red LED, green LED, blue-green LED, yellow-green LED, a blue, and an ultra-violet LED.

- 83. A color printer as in claim 64 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.
- 84. A color printer as in claim 64 wherein said optical system includes at least one raster scanning device selected from a group comprising: a polygon, a hologon, or a galvanometer.
- 85. A method of printing to a photosensitive medium comprising:

generating a first color beam;
generating a second color beam;
generating a third color beam;
generating at least a fourth color beam;

modulating combining said first, second, third, and fourth

color beams; and

an optical system for imaging said modulated beams onto said photosensitive medium.

86. A color printer for printing to a photosensitive medium comprising:

a light source for generating a first color beam, a second color beam, a third color beam, and a fourth color beam;

a modulator for modulating said color beams; and an optical system for imaging said modulated beams onto said photosensitive medium.

- 87. A color printer as in claim 86 wherein said photosensitive medium is a motion picture film having at least four sensitive layers.
- 88. A color printer as in claim 86 wherein said photosensitive medium is a motion picture negative film having at least four sensitive layers.

- 89. A color printer as in claim 86 wherein said photosensitive medium is a motion picture print film having at least four sensitive layers.
- 90. A color printer as in claim 86 wherein said photosensitive medium is a motion picture reversal film having at least four sensitive layers.
- 91. A color printer as in claim 86 wherein said photosensitive medium is a photographic film having at least four sensitive layers.
- 92. A color printer as in claim 86 wherein said photosensitive medium is a photographic negative film having at least four sensitive layers.
- 93. A color printer as in claim 86 wherein said photosensitive photographic print film having at least four sensitive layers.
- 94. A color printer as in claim 86 wherein said photosensitive photographic reversal film having at least four sensitive layers.
- 95. A color printer as in claim 86 wherein said photosensitive medium is a photographic paper having at least four sensitive layers.
- 96. A color printer as in claim 86 wherein said modulator is a reflective LCD.
- 97. A color printer as in claim 86 wherein said modulator is a transmissive LCD.
- 98. A color printer as in claim 86 wherein said modulator is a digital micromirror device.

- 99. A color printer as in claim 86 wherein said modulator is a gated light valve.
- 100. A color printer as in claim 86 wherein said modulator is an acousto-optic.
- 101. A color printer as in claim 86 wherein said modulator is an electro-optic modulator.
- 102. A color printer as in claim 86 wherein said light sources are selected from a group comprised of infra-red, red, green, yellow-green, bluegreen, blue, and ultra-violet lasers
- 103. A color printer as in claim 86 wherein said light sources are selected from a group comprised of infra-red LED array, red LED array, green LED array, blue-green LED array, yellow-green LED array, a blue LED array, and an ultra-violet LED array.
- 104. A color printer as in claim 86 wherein each of said light sources are comprised of infra-red LED, red LED, green LED, blue-green LED, yellow-green LED, blue LED, and ultra-violet LED.
- 105. A color printer as in claim 86 wherein said light sources are selected from a group comprised of laser, LED array, filtered xenon, and filtered tungsten.
- 106. A color printer as in claim 86 wherein said optical system includes at least one raster scanning device selected from a group comprising: a polygon, a hologon, or a galvanometer.
- 107. A method of printing to a photosensitive medium comprising:

generating a first color beam; generating a second color beam; generating a third color beam; and generating at least a fourth color beam.

108. A color printer for printing to a photosensitive medium comprising:

a first light source for generating a blue-green color beam; a second light source for generating a green color beam; a dichroic mirror for combining said blue-green and said

green color beam;

a third light source for generating a red color beam; at least a fourth light source for generating a blue color

beam;

a dichroic combiner for combing said blue-green, green, red, and blue color beams modulator means for modulating said blue-green, green, red, and blue color beams; and

an optical system for combining and imaging said modulated beam onto said photosensitive medium.

109. A printer for printing to a photosensitive medium comprising:

a first light source for generating an infra-red color beam; a second light source for generating a green color beam; a dichroic mirror for combining said infra-red and said

green color beam;

a third light source for generating a red color beam; at least a fourth light source for generating a blue color

beam;

a dichroic combiner for combing said infra-red, green, red, and blue color beams modulator means for modulating said infra-red, green, red, and blue color beams; and

an optical system for combining and imaging said modulated beam onto said photosensitive medium.

110. A color printer for printing to a photosensitive medium comprising:

a first light source for generating a first color beam; a first shutter for interrupting said first color beam; a second light source for generating a second color beam; a second shutter for interrupting said second color beam; a third light source for generating a third color beam; a third shutter for interrupting said third color beam; a fourth light source for generating a fourth color beam; a fourth shutter for interrupting said fourth color beam; a modulator for modulating said first, second, third, and

fourth color light beams sequentially; and

an optical system for imaging said modulated beams onto said photosensitive medium.